CLAIMS

What is Claimed is:

1. A method for erecting (flat) blanks (12) for cartons, collapsible boxes, trays (11) and the like, with said blanks (12) being moved in front of an aperture (16) of a forming shaft (17) and introduced therein by means of a forming punch (20, 22), which can be raised and lowered, whereby parts of the blank (12) in the region of walls (15) of the cartons, collapsible boxes, trays and the like, are erected in the process, characterized in that, once the blank (12) has been introduced into the forming shaft (17), the forming punch (20, 22) is moved, in a direction opposite to that of pressing down the blanks (12), at least partially out of the forming shaft (17) and returned to a position in front of the aperture (16) of the forming shaft (17).

2. The method according to Claim 1, characterized in that the forming shaft (17) is assigned at least two forming punches (20, 22) which are moved into the forming shaft (17) in succession in order to press respectively a separate blank (12) into the forming shaft (17).

3. The method according to Claim 2, characterized in that the forming punches (20, 22) can be swiveled out of the forming shaft (17).

4. The method according to Claim 2, characterized in that the forming punches (20, 22) are moved outside of the forming shaft (17) in front of its aperture (16) for the purpose of pressing down a further blank (12).

5. The method according to Claim 1, characterized in that the forming punches (20, 22) are continuously driven by means of a common drive (24, 55).

6. The method according to Claim 1, characterized in that the blanks (12) are taken from a stack of blanks (13) and conveyed in front of the aperture (16) of the forming shaft (17).

7. The method according to Claim 1, characterized in that after passing through the forming shaft (17) the at least partially erected blanks (12) are fed to a conveying means (21) having at least one conveyor belt (45).

8. The method according to Claim 7, characterized in that the blanks (12) are fed by the forming punches (20, 22) to the conveying means (21), or pressed between carriers (48) mounted on the conveying means (21).

9. The method according to Claim 7, characterized in that the erection of the blanks (12) is completed during their transport on the conveying means (21) by the filling of products (10) into the partially completed cartons, collapsible boxes, trays (11) and the like.

10. A device for erecting flat blanks (12) for cartons, collapsible boxes, trays (11) and the like, in which said blanks (12) are moved in front of an aperture (16) of a forming shaft (17) and introduced therein by means of a forming punch (20, 22), which can be raised and lowered, whereby parts of the blank (12) in the region of walls of the cartons, collapsible boxes, trays (11) and the like, are erected in the process, characterized in that, once the blank (12) has been pressed into the forming shaft (17), the forming punch (20, 22) can be moved at least partially outside of the forming shaft (17) and returned to a position in front of the aperture (16) of the forming shaft (17), wherein the forming punch (20, 22) is moved out of the forming shaft (17) in a direction opposite to that of pressing in the blanks (12).

11. The device according to Claim 10, characterized in that the forming shaft (17) is assigned at least two forming punches (20, 22) which can be moved in succession in order to press respectively a separate blank (12) through the forming shaft (17).

12. The device according to Claim 11, characterized in that the forming punches (20, 22) are rotatably mounted for the purpose of swiveling out of the forming shaft (17) or for swiveling in front of the aperture (16) of the forming shaft (17).

13. The device according to Claim 11, characterized in that the respective forming punches (20, 22) are rotatably mounted on a carriage (42, 50) that can be moved up and down outside of the forming shaft (17).

14. The device according to Claim 10, characterized in that arranged at the end of the forming shaft (17) is a conveying means (21) for receiving the blanks (12) that have been at least partially erected in the forming shaft (17).

15. The device according to Claim 14, characterized in that the at least partially erected blanks (12) can be transferred directly by the forming punches (20, 22) to receptacles for blanks (12) in the region of the conveying means (21).

16. The device according to Claim 13, characterized in that the forming punches (20, 22) are disposed to move up and down in the vertical direction on a respective endless conveyor as part of a linear axis (51).

17. The device according to Claim 14, characterized in that the forming punches (20, 22) can be pivoted or swiveled on a strand of the endless conveyor by means of a carriage (50) arranged on the endless conveyor.

18. The device according to Claim 14, characterized in that the endless conveyor is assigned a common drive (24, 55).

19. The device according to Claim 13, characterized in that the carriages (50) are each assigned a drive (52) for the purpose of pivoting the forming punches (20, 22).